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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,686	07/20/2001	Roberto Ayala	YOR920010275US1/I31-0005	9950

7590 10/06/2005  
Philmore H. Colburn II  
Cantor Colburn LLP  
55 Griffin Road South  
Bloomfield, CT 06002

EXAMINER

THEIN, MARIA TERESA T

ART UNIT PAPER NUMBER

3627

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/909,686

Applicant(s)

AYALA ET AL.

Examiner

Marissa Thein

Art Unit

3627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-20-01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on August 20, 2001 is being considered by the examiner.

### ***Drawings***

The drawings filed on July 20, 2001 are acceptable.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of

whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450 U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a

§101 rejection finding the claimed invention to be non-statutory. See Ex parte Bowman, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, claims 1-16 have no connection to the technological arts. None of the steps indicate any connection to a computer or technology. For example claim 1, the steps of receiving and determining are broadly interpreted as manual steps. Therefore, the claim is directed towards non-statutory subject matter, i.e. not within technological arts. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the steps are being performed within the technological arts, such as using a digital computing device.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 17, the phrase "convenient time periods" is unclear. Examiner suggests to Applicant to better clarify the phrase "convenient time periods".

Regarding claims 1 and 17, the phrase "forecast data" is unclear. Does Applicant mean projected or demand forecast? Examiner suggests to Applicant to better clarify the phrase "forecast data".

Regarding claims 1 and 17, the claim recites the conditional statement "if said days of supply.....", which renders the claim indefinite since it is unclear to the

Examiner what the scope of the claim is when the conditional statement is false. The Applicant should consider rewriting the claim language to avoid the use of conditional statements. For examination purposes, the Examiner will take the broadest reasonable interpretation of the claims and assume the conditional statement is true.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1–32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,006,196 to Feigin et al. in view of U.S. Patent Application Publication No. 2002/0072986 to Aram.**

Regarding claims 1, 3-5, 11-12, 14-17, 19-21, 27-28, and 30-32, Feign discloses a method and a storage medium encoded with machine- readable computer program code for managing inventory comprising: receiving an updated demand forecast and updated demand forecast (col. 5, lines 49-col. 6, line 2; col. 2, lines 22-52) and; determining for a given time period: projected inventory level using the projected data, supplier commitment data, and prior periods' projected inventory levels; and days of supply of inventory using the projected inventory level for a current item period and forecast data for subsequent periods (col. 6, lines 3-17; col. 7, lines 57-col. 8, line 3).

The phrase "if said days of supply is out of a predetermined range for a given time period, taking a corrective action", the language does not move to distinguish the

Art Unit: 3627

claimed invention from the reference (Feigin). The phrase is in a conditional sense or in the alternative. The noted "if" step is not necessarily performed. Accordingly, and as in the method itself, once the positively recited steps are satisfied, the method as a whole is satisfied -- regardless of whether or not other steps are conditionally invocable under certain other hypothetical scenarios.

Nonetheless, Feigin does not disclose if said days of supply is out of a predetermined range for a given time period, taking a corrective action; providing a search criteria including a part number identifying the stock item (**Claims 3 and 19**); part name identifying the stock item (**Claims 4 and 20**); part description identifying the stock item (**Claims 5 and 21**); the predetermined range for the projected days of supply is established by at least one of manufacturer, and a supplier (**Claims 11 and 27**); the predetermined range for the projected days of supply is a single number (**Claims 12 and 28**); the corrective action includes modifying the supplier commitment data, delaying a shipment, and increasing the supplier commitment data (**Claims 14-16 and 30-32**). Feigin discloses the management of inventory that comprises a distribution resource planning engine (DRP) (Col. 1, lines 7-10). The DRP comprises an input means for inputting to the engine information derived from a database, a forecasts engine, and an inventory planning engine comprising inventory status, planning parameters, and demand forecasts; a logic means; and an output means for output means (col. 2, lines 37-52).

Aram, on the other hand, teaches if the days of supply is out of a predetermined range, taking a corrective action (paragraphs 150-152); providing a search criteria



Art Unit: 3627

including a part number identifying the stock item (**Claims 3 and 19**) (abstract); part name identifying the stock item (**Claims 4 and 20**) (abstract); part description identifying the stock item (**Claims 5 and 21**) (abstract); the predetermined range for the projected says of supply is established by at least one of manufacturer, and a supplier (**Claims 11 and 27**) (paragraphs 150-151); the predetermined range for the projected says of supply is a single number (**Claims 12 and 28**) (paragraphs 150-152); the corrective action includes modifying the supplier commitment data, delaying a shipment, and increasing the supplier commitment data (**Claims 14-16 and 30-32**) (paragraphs 150-152) .

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method and storage medium encoded with machine-readable program of Feigin, to include if the days of supply is out of a predetermined range, taking a corrective action; providing a search criteria including a part number, name, description; and corrective action, as taught by Aram, in order to avoid the risk of letting down a customer by not fulfilling an order (Aram paragraph 150).

Regarding claims 2, 6-9, 13, 18, 22-25, and 29, Feigin the given time period is established by at least one of a supplier and manufacturer (Figure 1; col. 5, lines 35-48; col. 6, lines 3-18); the number of convenient time periods includes selected horizon (col. 3, lines 19-52 col. 6, lines 3-18); the number of convenient time periods is measured in increments of time, the increments include one of: days, weeks, and months (col. 3, lines 28-35); the projected forecast data includes a quantity of the stock item expected to be consumed during at least one of the number of convenient time periods (col. 4,

lines 5-9); and the days of supply is measured in time increments including one of days, weeks, and months (col. 3, lines 28-35).

Regarding claims 10 and 26, Feigin discloses the supplier commitment data includes a quantity of the stock item a supplier commits to provide for a manufacturer (col. 3, line 54 – col. 4, line 22); the determining for a given time period the projected inventory level include performing a calculation comprising:

$PI(n) = PI(n-1) - F(n-1) + C(n-1)$ , wherein further PI represents a projected inventory value; n represents a variable, the variable representing a time period; F represents a projected forecast value; and C represents a supplier commitment value. (col. 3, line 20 – col. 4, line 21; col. 6, lines 3-17).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,287,267 to Jayaraman et al. discloses a method for predicting parts procurement requirements for products over plurality of time periods.

U.S. Patent No. 5,819,232 to Shipman discloses an inventory control method and apparatus for controlling a manufacturing or distribution process.

U.S. Patent No. 5,953,707 to Huang et al. discloses a decision support system for the management of an agile supply chain that span from a point of creation to a point of consumption.

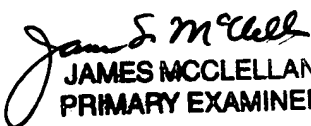
Art Unit: 3627

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa Thein whose telephone number is 571-272-6764. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alex Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mtot  
September 30, 2005

  
JAMES MCCLELLAN  
PRIMARY EXAMINER